EPI Update for Friday, July 29, 2005

Center for Acute Disease Epidemiology

Iowa Department of Public Health

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Pertussis Treatment and Chemoprophylaxis table link

We regret that in last week's Friday update, what was meant to be a table for pertussis treatment and chemoprophylaxis ended up being somewhat unreadable when it was sent over the list serve. Please go to the following link: pertussis treatment and chemoprophylaxis table for a good copy of this table.

Interpretation of Hepatitis B Laboratory Profiles: an overview for local public health and other health care providers

IDPH will review every lab result for Hepatitis B (HBV) before sending out the disease report. Only in those cases where an acute infection is suspected will results be sent to local public health agency for follow-up.

The following information is intended to help clarify test results when conducting a disease investigation. Since several tests for HBV are used to determine susceptibility to HBV infection—vaccine-induced immunity and acute or chronic infection—interpretation is often difficult. It may be helpful to review results with the person's physician when attempting to determine acute or chronic status.

Routine Tests

- **Hepatitis B Surface Antigen (HBsAg):** A serologic marker on the surface of HBV. It can be detected in high levels in serum during acute or chronic hepatitis. The presence of HBsAg indicates that the person is infectious. HBsAg refers to the outer surface of the hepatitis B virus that usually triggers an antibody response. It appears 1- 10 weeks after exposure to the virus, and if HBsAg persists after six months, it signals a chronic hepatitis B infection.

- **Hepatitis B Surface Antibody (anti-HBs):** The presence of anti-HBs is generally interpreted as indicating recovery and immunity from HBV infection. Anti-HBs also develop in a person who has been successfully vaccinated against hepatitis B. This is sometimes written as HbsAb.

- **Total Hepatitis B Core Antibody (anti-HBc):** Appears after the onset of symptoms in acute hepatitis B and persists for life. The presence of anti-HBc indicates previous or ongoing infection with hepatitis B virus (HBV) in an undefined time frame. The appearance of anti-HBc with the protective antibodies (HBsAb+ or anti-HBs+) indicates recovery from an infection. In chronically infected persons, it will appear with the antigen (HBsAg).

- **IgM Antibody to Hepatitis B Core Antigen (IgM anti-HBc):** This antibody appears during acute or recent HBV infection and is present for about 6 months after initial infection. This antibody will eventually decrease and marker will eventually be replaced with IgG anti-HBc.

Additional Tests

- **IgG Anti-HBc (Hepatitis B core antibody IgG):** Indicates past or present infection with HBV. Its presence with surface antibodies (HBsAb or anti-HBs) indicates prior infection and recovery. If present with viral antigen (HBsAg), this indicates a chronic infection.

- **HBeAg (Hepatitis B e-Antigen):** Associated with chronic infections and is used as a marker of active viral disease and indicates that a patient is more likely to spread the disease.

- **HBeAb** or **anti-HBe (Antibody to Hepatitis B e-antigen):** Detected in patients who have recovered from hepatitis B infections as well as those who are chronically infected. This antibody appears weeks to months after HBeAg is no longer detectable in the blood. If this test result is "positive" in a person with chronic hepatitis B, then it indicates reduced viral replication (or inactive liver disease) thus less infectiousness and signals complete e-antigen seroconversion.

- **HBV DNA (Hepatitis B viral DNA):** A marker to detect the amount of virus in the bloodstream and is used to diagnose active hepatitis B viral disease. Testing requires very sensitive and expensive PCR methods. Results are usually quantified in terms of picograms/ml or copies/ml. Not typically used to diagnose acute HBV cases.

Serology interpretation tables are available from CDC and the Hepatitis B Foundation.

For more information on viral hepatitis, visit the Iowa Department of Public Health Hepatitis Program Website

Tips for safe and healthy travel

Although traveling abroad is usually a wonderful and enjoyable experience, approximately 50percent of international travelers get sick or injured (hurt) during their trip. As a result it is always wise to do some research and get thorough information on your countries of destination before your trip. Click on the following "top travel tips" from the CDC, to find out what you can do prevent most travel-related sickness and injury:

- Wash your hands frequently with soap and water or an alcohol-based hand rub, especially before eating.

- Drink only boiled or bottled water or carbonated drinks from sources you trust. Avoid tap water, fountain drinks, and ice cubes.

- Eat only fully cooked food or fruits and vegetables you have peeled. Remember: boil it, cook it, peel it, or forget it!

- If visiting an area where there is risk for malaria, take malaria prevention medication before, during, and after your trip, as appropriate. Check the font color here.

- If you are likely to be bitten by insects (like mosquitoes or ticks) use insect repellent with an approved insect repellent ingredient. For more information on mosquito repellents go to mosquito repellent fact sheet.

- Know how to prevent injuries during your trip.

Additional information and other travel tips are available at:
http://www.cdc.gov/travel/other/traveltips.htm

Please note- The Fall EPI Update date change for region one:

The date for the Fall EPI Update at Iowa Valley Continuing Education Center, Marshalltown, IA has been changed to Oct. 25, 2005.

Meetings:

Link to **8th Annual HIV/AIDS Conference to be held *Oct. 11, 2005, through Oct. 12, 2005***

http://www.trainingresources.HIV/AIDS Conference Link